



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
1772589-142	10/14/88	BORGERS	3220-18158

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EXAMINER	
MANUEL, G.	
ART UNIT	PAPER NUMBER
335	4

DATE MAILED: 04/21/89

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.       | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449  | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-20 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-20 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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Claims 12-15 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 12, the means for coupling lacks connecting structure with the means for generating.

With respect to claim 13, the first and second outputs of the generating means lack antecedence. It is improper to claim the body. Therefore, it is improper to claim "electrodes being implanted."

With respect to claims 14 and 15, it is unclear how the means for generating an oscillating electrical field differs from the means for generating an oscillating electrical field with a polarity reversal ...

With respect to claims 17 and 18, It is improper to claim the body. Therefore, it is improper to claim "electrodes being implanted."

With respect to claim 19, it is unclear what is meant by "timing the predetermined period of time."

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section

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102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1, 2, 4, 5, 7, 9, 10, 12-14, 16-18 are rejected under 35 U.S.C. 103 as being unpatentable over Bentall et al

Bentall et al disclose an electrical apparatus which is capable of applying an electrical field to living tissue. One of ordinary skill in the art would find it obvious to use this apparatus to regenerate nerves because the device is adapted for use as a transcutaneous nerve stimulator.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Manning discloses a device which uses an electrical field to cause cells to heal.

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Maurer discloses a pulse generator and power amplifier for use in transcutaneous nerve stimulation.

Miller discloses a transcutaneous nerve stimulator with variable pulse rate and with adjustment.

An inquiry concerning this communication should be directed to George Manuel at telephone number 703-557-3125.

*GM*

*MS*